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## Financial and Economic Impact Analysis of Buffalo Harbor Center in Memorial Auditorium

Harrison Price Company



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Section 2

**FINANCIAL AND ECONOMIC IMPACT ANALYSIS  
OF BUFFALO HARBOR CENTER  
IN MEMORIAL AUDITORIUM  
Buffalo, New York**

**Prepared for**

**CAMBRIDGE SEVEN ASSOCIATES, INC.  
March 1994**

**On Behalf of**

**HORIZONS WATERFRONT COMMISSION**

**Prepared by**

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## **I. Introduction**

The financial implications of developing the Buffalo Harbor Center attraction complex in Memorial Auditorium are examined in this section of the report, followed by an assessment of the project's economic impact on the Buffalo region. The analysis updates and revises HPC's prior feasibility study for the project, completed in September 1992, to reflect expanded entertainment content in the Auditorium location, which substantially enhances the attraction's attendance and financial outlook. All monetary amounts are expressed in constant 1994 dollars and do not take into account inflation. While every effort has been made to ensure a conservative, realistic appraisal of the project's performance, certain independent assumptions have nevertheless been made that influence financial results. These assumptions, described where applicable in the following narrative, are subject to change and/or refinement as planning reaches successively more definitive stages.

## **II. Summary of Economic Performance**

### **A. Estimated Attendance Volume**

As discussed in recent meetings with the client group, the annual attendance potential of Buffalo Harbor Center in Memorial Auditorium is projected at 1.2 million visits annually, approximately two-thirds of which, or some 780,000 visits, will be generated by the tourist market. Visitation of this magnitude, representing the upside estimate in the earlier September 1992 report, takes into account the greater "critical mass" and drawing power of the combined aquarium/IMAX theater/technology museum in the Auditorium location.

### **B. Estimated Operating Revenues**

Operating revenues at Buffalo Harbor Center will be primarily generated by

visitor spending at the site on admissions, food and beverages, and gift and souvenir merchandise. It is also envisioned that the project, as a nonprofit enterprise, would develop a membership support group. Additionally, aquariums and museums have become increasingly popular for various kinds of special events--receptions, convention gatherings, banquets, seminars, and so on--normally staged after public hours, which generates further ancillary income.

#### **Admissions Revenue.**

Admission tickets represent the largest source of revenue at the subject attraction. To provide a frame of reference on an appropriate pricing structure, Table 1 shows current admission fees at major aquariums in the United States, while corresponding data for major science/technology museums are presented in Table 2. In consideration of these data and the conceptual plan for Buffalo Harbor Center, HPC suggests a three-option ticket package--an exhibits-only ticket, a theater-only ticket, and a combination price allowing admission to all available attractions. An adult ticket price of \$9.75 is recommended for the exhibits-only option, while the IMAX theater-only ticket is estimated at \$5.50 and the combination ticket at \$12.95. Scaled-down prices would be made available for children under 12 years and for senior citizens. A schedule of this general description should represent a reasonable and acceptable price in the Buffalo marketplace on the basis of the entertainment value that the attraction will deliver.

After adjusting for attendance mix, group and promotional discounts, and a certain incidence of free admissions (primarily members), the effective "yield" on the adult combination ticket price is estimated at 60 percent, resulting in net admissions revenue of \$7.77 per capita. A yield of this magnitude is consistent with experience

Table 1

**ADMISSION PRICE SCHEDULE AT  
SELECTED AQUARIUMS  
1994**

<u>Aquarium</u>	<u>Adult</u>	<u>Child (Age Range)</u>	<u>Senior Citizen</u>
National Aquarium (Baltimore)	\$11.50	\$7.50 (3-11)	\$9.50
Monterey Bay Aquarium (California)	11.25	5.00 (3-12)	8.25
Tennessee State Aquarium (Chattanooga)	8.75	4.75 (3-11)	8.75
Aquarium of the Americas (New Orleans)	8.75	4.50 (2-12)	6.5
New Jersey State Aquarium (Camden)	8.50	5.50 (3-11)	7.00
New England Aquarium (Boston)	7.50	3.50 (3-15)	6.50
Shedd Aquarium (Chicago)			
Aquarium Only	4.00	3.00 (3-11)	3.00
Aquarium/Oceanarium Combination	8.00	6.00 (3-11)	6.00
Oregon Coast Aquarium (Newport)	7.35	3.15 (4-12)	5.25
Texas State Aquarium (Corpus Christi)	7.00	3.75 (4-17)	5.00
Seattle Aquarium (Seattle)	6.50	4.00 (6-18) 1.50 (3-5)	5.00
Aquarium of Niagara Falls (New York)	6.25	3.95 (5-14)	4.25

Source: Harrison Price Company.

Table 2

**ADMISSION PRICE SCHEDULE AT SELECTED  
SCIENCE/TECHNOLOGY MUSEUMS  
1994**

<u>Museum</u>	<u>Individual Tickets</u>			<u>Combination Tickets</u>	
	<u>General Admission</u>	<u>IMAX/Omni Theater</u>	<u>Planetarium</u>	<u>General/Theater</u>	<u>All Attractions</u>
Franklin Institute (Philadelphia)					
Adult	\$9.50	\$7.00	\$7.00	\$12.00	n/o
Senior Citizen	8.50	6.00	6.00	10.50	n/o
Child 4-11	8.50	6.00	6.00	10.50	n/o
Boston Museum of Science					
Adult	\$7.00	\$7.00	\$6.00	\$11.00	\$15.00
Senior Citizen	5.00	5.00	4.00	8.00	11.00
Child 4-11	5.00	5.00	4.00	8.00	11.00
Carnegie Science Center (Pittsburgh)					
Adult	\$5.75	\$5.75	\$10.00 1/	n/o	15.50 2/
Senior Citizen	4.25	4.25	6.50 1/	n/o	11.00 2/
Child/Junior 3-18	4.25	4.25	6.50 1/	n/o	11.00 2/
Museum of Science & Industry (Chicago)					
Adult	\$5.00	\$5.50	n/o	\$9.00	n/o
Senior Citizen	4.00	4.50	n/o	7.00	n/o
Child 5-12	2.00	3.50	n/o	5.00	n/o

Table 2  
(Continued)

Museum	Individual Tickets			Combination Tickets	
	<u>General Admission</u>	<u>IMAX/Omni Theater</u>	<u>Planetarium</u>	<u>General/Theater</u>	<u>All Attractions</u>
Maryland Science Center (Baltimore)					
Adult	n/o	n/o	n/o	n/o	\$8.50
Senior Citizen	n/o	n/o	n/o	n/o	7.00
Child/Junior 4-17	n/o	n/o	n/o	n/o	7.00
Pacific Science Center (Seattle)					
Adult	\$5.50	\$4.50	Included	\$6.50	n/o
Senior Citizen	4.50	3.50	with general	5.50	n/o
Junior 6-13	4.50	3.50	admission	5.50	n/o
Child 2-5	3.00	2.50	ticket	4.50	n/o

n/o means not offered.

1/ Includes general admission to the museum.

2/ Includes museum, theater, planetarium, and submarine.

Source: Harrison Price Company.

at other major aquariums, as shown in Table 3, and somewhat higher than typically reported for science museums (most of which have very liberal discount policies, particularly where the museum receives public tax support).

**Food and Merchandise Expenditures.** Visitor spending on food, beverages, and merchandise will be another major revenue source for Buffalo Harbor Center. Prevailing rates of spending at other aquariums and science museums are presented in Table 4. As indicated, food expenditures are generally modest as would be expected given typically short average visitor stay times and the lack of emphasis on such operations that is characteristic of nonprofit attractions. In contrast, several aquariums and museums report healthy expenditures on gift merchandise, particularly where product mix emphasizes high-quality, theme-related books, toys, videos, and art goods (such as the Monterey Aquarium).

Allowing that the plan for Buffalo Harbor Center includes a full-service water-view restaurant, which will substantially transcend the normal fast food offering at most comparable attractions, visitor spending on food is projected at \$2.00 per capita, as set forth in Table 5, while merchandise spending is projected at \$4.00 per capita. These are both ambitious goals and presume that food and retail offerings at the project will be of good quality and effectively marketed. With specific reference to gift shop operations, the theme of the attraction provides fertile opportunities for the development of unique and appealing items.

**Membership Revenue.** Membership support groups exist at virtually all cultural institutions, whether operated publicly or privately. Memberships are sold on an annual or lifetime dues basis, with several options

usually available (individual, family, patron, sponsor, and so on), as illustrated by the data for comparable existing facilities in Table 6. A goal of 15,000 members appears realistic and conservative for Buffalo Harbor Center in light of what has been achieved at similar attractions. Assuming an average cost of \$35 per membership and then dividing the total gross amount by overall attraction attendance of 1.2 million, imputed per capita membership revenue would amount to some 44 cents.

**Special Events/Catering Revenue.** Many museums and aquariums have developed very successful after-hours event programs catering to groups seeking a unique venue for social and business gatherings. Based on experience elsewhere, it is conservatively assumed that Buffalo Harbor Center could attract 100 events annually. At an average of 250 persons per event, total attendance from this source comes to 25,000 people per year. Further assuming an average expenditure of \$20 per attendee (which allows for a mix of simple cocktail receptions and full banquets) and again dividing by the attraction's overall attendance base of 1.2 million, average per capita revenue from this source is imputed at roughly 42 cents. The amount of revenue accruing from special functions is directly related to the effort made to market the facility for this purpose and the quality of catering service provided, and Buffalo Harbor Center may well be able to exceed this estimate given a major program to attract event business.

**Total Per Capita Revenues.** Combined visitor spending on admissions, food, merchandise, memberships, and special events at Buffalo Harbor Center amounts to a total of \$14.63, as Table 5 indicates. This figure represents a stabilized target, with stabilization normally expected in about the third year of operation.

Table 3

**YIELD ON ADULT TICKET PRICE AT SELECTED  
AQUARIUMS AND SCIENCE MUSEUMS  
1992-93**

<u>Aquarium or Museum</u>	<u>Per Capita Admissions Revenue 1/</u>	<u>1992 Adult Ticket Price 2/</u>	<u>Effective Yield on Ticket Price 3/</u>
<b>Aquariums</b>			
Monterey Bay Aquarium (Monterey)	\$6.85	\$9.75	70%
Oregon Coast Aquarium (Newport)	4.92	7.35	67
Aquarium of the Americas (New Orleans)	5.65	8.75	65
National Aquarium (Baltimore)	6.97	11.50	61
New England Aquarium (Boston)	4.50	7.50	60
Shedd Aquarium (Chicago)	4.12	7.00	59
<b>Science/Technology Museums</b>			
Reuben Fleet Science Center. (San Diego)	\$3.41	\$6.00	57%
Discovery Place (Charlotte)	3.22	8.00	40
Pacific Science Center (Seattle)	1.86	6.50	29

1/ Includes general admission, theaters, planetariums, and other attractions requiring tickets.

2/ Adult combination price for general admission and any other attractions.

3/ Per capita admissions revenue divided by adult ticket price.

Source: Harrison Price Company.



Table 4

**VISITOR SPENDING ON FOOD AND MERCHANDISE  
AT SELECTED AQUARIUMS AND SCIENCE MUSEUMS  
1992-93**

<u>Aquarium or Museum</u>	<u>Average Per Capita Expenditure</u>	
	<u>Food Service</u>	<u>Gift Shop(s)</u>
Aquariums		
Monterey Bay Aquarium (California)	\$0.50 1/	\$4.12
New England Aquarium (Boston)	<----- 2.74 ----->	
Aquarium of the Americas (New Orleans)	<----- 2.03 ----->	
Texas State Aquarium (Corpus Christi)	...	1.90
Oregon Coast Aquarium (Newport)	n/a	1.64
Science/Technology Museums		
Reuben Fleet Science Center (San Diego)	\$0.39	\$1.17
Pacific Science Center (Seattle)	0.27	0.70

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n/a means not available.

1/ Net concession revenue.

Source: Harrison Price Company.

Table 5

**ESTIMATED OPERATING REVENUES FOR  
BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<b>Stabilized Year Estimate</b>
Estimated Annual Attendance (thousands)	1,200
Estimated Visitor Expenditure Per Capita	
Admissions 1/	\$7.77
Food and Beverages	2.00
Merchandise	4.00
Memberships 2/	0.44
Special Events/Catering 3/	<u>0.42</u>
Total	\$14.63
Total Gross Visitor Expenditures (thousands)	
Admissions	\$9,324
Food and Beverages	2,400
Merchandise	4,800
Memberships	528
Special Events/Catering	<u>504</u>
Total	\$17,556
Less: Cost of Goods Sold (thousands)	
Food and Beverages (at 35 percent of sales)	\$840
Merchandise (at 50 percent of sales)	2,400
Special Events/Catering (at 30 percent of sales)	<u>151</u>
Total	\$3,391
Total Net Revenue (thousands)	\$14,165

- 1/ Based on an adult admission fee of \$12.95 for the combination museum/theater ticket at an average yield of 60 percent.
- 2/ Based on 15,000 memberships at an average of \$35, divided by the 1.2 million overall attendance base.
- 3/ Based on 100 events annually at 250 persons each and average per capita revenue of \$20, divided by the 1.2 million overall attendance base.

Table 6

**MEMBERSHIP FEES AT SELECTED  
AQUARIUMS AND SCIENCE MUSEUMS  
1994**

<u>Aquarium or Museum</u>	<u>Basic Membership Categories</u>			<u>Additional Membership Categories</u>
	<u>Individual</u>	<u>Senior Citizen/ Student</u>	<u>Family</u>	
Aquariums				
Monterey Bay Aquarium (California)	\$39	\$29	\$55	Contributor's Circle (\$100), Supporter (\$250), Sustainer (\$500), Associate (\$1,000), Benefactor (\$2,500)
Shedd Aquarium (Chicago)	35	n/o	50	Contributor (\$100), Associate (\$250), Sponsor (\$500), Patron (\$1,000)
New England Aquarium (Boston)	35	n/o	55	Quartermaster (\$70), Commodore (\$85), Mariner (\$100), Friend (\$250), Navigator (\$1,250)
Oregon Coast Aquarium (Newport)	25	n/o	45	Sponsor (\$100), Patron (\$250), Benefactor (\$1,000)
National Aquarium (Baltimore)	32	29	63	Family Plus (\$95), Member Gold (\$135), Curator's Circle (\$250), Director's Circle (\$500), Chairman's Circle (\$1,000), Founder's Circle (\$2,500)
Science/Technology Museums				
Boston Museum of Science	\$50	n/o	\$70	Sustaining (\$150), Patron (\$300), Fellow (\$500), Director's Circle (\$1,000)

Table 6  
(Continued)

Aquarium or Museum	Basic Membership Categories			Additional Membership Categories
	Individual	Senior Citizen/ Student	Family	
Maryland Science Center (Baltimore)	\$35	\$30	\$57	Sustaining (\$90), Contributing (\$150), Patron (\$500)
Carnegie Science Center (Pittsburgh)	35	20	55	Reciprocal (\$125), Friend (\$300), Guild (500), Benefactor (\$1,000)
Pacific Science Center (Seattle)	20	n/o	35	Gold Card Family (\$50), Contributor (\$100), Supporter (\$250), Sustainer (\$500), Associate (\$1,000), Patron (\$2,500), Benefactor (\$5,000)

n/o means not offered.

Source: Harrison Price Company.

#### **Total Gross Revenues.**

Aggregate gross revenues for the subject attraction as generated from all sources identified above are projected at \$17.6 million. Admissions revenue will represent approximately 53 percent of the total, followed by merchandise sales at 27 percent, and food sales at around 14 percent. On the whole, direct spending by visitors will contribute 94 percent of all operating revenue, with conservatively forecast memberships and special events generating the balance. It should be noted that no allowance has been made for unearned revenue--philanthropic donations and sponsorships arising from the private sector as well as grants, contributed services, and tax subsidies from the public sector. At many nonprofit operations, unearned revenues equal or surpass the earned-revenue total, although the most successful nonprofit institutions receive a minimum of about 70 percent of overall income on an earned basis.

**Total Net Revenues.** To arrive at net revenues, the cost of food and merchandise goods sold must be deducted from the foregoing gross income estimates. As the table shows, sales costs are expected to amount to some \$3.4 million per year using cost ratios typical for recreation attractions. Total net revenue is accordingly forecast at \$14.2 million per year.

#### **C. Estimated Operating Expenses**

Current operating expense ratios for existing aquariums and science museums, expressed as a dollar amount per visitor served, are presented in Table 7. Operating budgets for the different facilities listed are dependent on a number of factors, including the intensiveness of programming--especially educational programs (including outreach, or off-site programs), the sophistication of the exhibitry, the size of the internal research and scientific staff employed (whose work is not necessarily directly

related to the public programs of the attraction), and other factors intrinsic to specific operations. With this important caveat in mind, per capita operating expenses are shown to range from \$5.72 per attendee to \$12.05 per capita.

Based on the concept for Buffalo Harbor Center as currently envisioned, a reasonable estimate of the total operating budget per visitor would be in the range of \$8 to \$9 per capita. Table 8 distributes this budget by expense category based on a composite of experience at several existing aquariums and science museums. The largest single expense item, as indicated, will be operating labor and associated benefits, estimated at roughly \$4.4 million annually. Marketing and development (fund-raising) is next in significance at some \$1.8 million annually, followed by general and administrative costs at about \$1.1 million (including management salaries and other general overhead), and utilities (encompassing water treatment and other animal life support systems) at \$702,000. Adding estimates for maintenance, insurance, animal care, theater/shows, and miscellaneous, aggregate operating expenses are shown to total \$10.4 million. Combining the previously estimated \$3.4 million cost of goods sold with other operating expenses as just described, the overall ratio of expenses to gross earned operating revenue is approximately 78 percent. The latter ratio is consistent with experience at successful existing nonprofit attractions.

#### **D. Estimated Net Operating Income (EBDIT)**

Table 9 indicates net operating income potentially attainable at Buffalo Harbor Center. A net income, or EBDIT (earnings before depreciation, interest, and income taxes) of slightly more than \$3.8 million annually is estimated. Dividing the latter by total gross revenues, a gross profit ratio of 22

Table 7

**PER CAPITA OPERATING EXPENSES AT  
SELECTED AQUARIUMS AND SCIENCE MUSEUMS  
1992-93**

<u>Aquarium or Museum</u>	<u>Total Operating Budget 1/ (thousands)</u>	<u>Total Attendance (thousands)</u>	<u>Per Capita Operating Budget</u>
Aquariums			
Monterey Bay Aquarium (California)	\$21,179	1,757	\$12.05
National Aquarium (Baltimore)	14,850	1,547	9.60
New England Aquarium (Boston)	12,300	1,333	9.24
Aquarium of the Americas (New Orleans)	8,806	1,407	6.26
Shedd Aquarium (Chicago)	12,822	2,241	5.72
Science/Technology Museums			
Maryland Science Center (Baltimore)	\$6,498	568	\$11.44
Pacific Science Center (Seattle)	8,982	1,230	7.30
Carnegie Science Center (Pittsburgh)	6,596 2/	983	6.71

1/ Excludes cost of food and merchandise goods sold.

2/ Excludes unallocated Carnegie Institute administrative overhead.

Source: Harrison Price Company.

Table 8

**ESTIMATED OPERATING EXPENSES FOR  
BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

<u>Expense Category</u>	<u>Percent of Gross Revenue</u>	<u>Total Expenses (thousands)</u>
General and Administrative 1/	6%	\$1,053
Operating Labor and Benefits	25	4,389
Marketing and Development	10	1,756
Utilities	4	702
Maintenance and Repairs	3	527
Animal Care and Feed 2/	2	351
Theater/Other Shows	5	878
Operating Supplies	1	176
Insurance	2	351
Miscellaneous and Contingency	3	<u>527</u>
Total	61%	\$10,709
Average Per Capita	...	<div style="border: 1px solid black; padding: 2px;">\$8.92</div>

1/ Includes management salaries, legal and accounting services, secretarial support, communications, and other administrative overhead.

2/ Includes aquarium chemicals, cleaning supplies, specimen replacement, and similar costs.

Source: Harrison Price Company.

Table 9

**ESTIMATED NET OPERATING INCOME  
FOR BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<b><u>Total (thousands)</u></b>
Estimated Total Net Earned Revenue 1/	\$14,165
Estimated Total Operating Expenses 2/	<u>10,358</u>
EBDIT 3/	<div style="border: 1px solid black; padding: 2px;">\$3,807</div>
EBDIT As Percent of Total Gross Revenue 4/	<div style="border: 1px solid black; padding: 2px;">22%</div>
Supportable Investment at Alternative Capitalization Rates (rounded)	
At 10 Percent	<div style="border: 1px solid black; padding: 2px;">\$38,100</div>
At 12 Percent	<div style="border: 1px solid black; padding: 2px;">31,700</div>
At 15 Percent	<div style="border: 1px solid black; padding: 2px;">25,400</div>

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1/ From Table 5.

2/ From Table 8.

3/ Earnings before depreciation, interest, and income taxes.

4/ Based on total gross revenue of approximately \$17.6 million  
as shown in Table 5.

Source: Harrison Price Company.



percent is calculated, comparable to experience at aquariums in New Orleans and Monterey. Operation of Buffalo Harbor Center, in conclusion, can be self-supporting given conformance to the basic assumptions employed in this analysis.

The table also shows that if EBDIT is capitalized at various alternative rates, the operation is capable of supporting an investment of \$25.4 million to \$38.1 million, representing a substantial share of the initial capital cost of the project, preliminarily estimated at between \$75 million and \$85 million.

### **III. Summary of Economic Impact**

#### **A. Overview of Economic Impact**

Development of Buffalo Harbor Center will produce multiple economic and social benefits for the City of Buffalo and surrounding region. These benefits are immediate as well as long-term and are related to the magnitude of total investment in the project and the resultant level of use or attendance. The project will mean substantial construction activity, a considerable influx of visitors and associated spending, the ripple effect of these expenditures through the economy, and the spotlight of public attention. A broad summary statement of the project's economic impact is set forth in Table 10. It should be noted that while certain components of estimated impact can be identified as fully captured by the city of Buffalo and/or Erie County, other benefits will be diffused throughout a regional area encompassing western New York and adjacent sections of Ontario, Canada; there will also be a moderate amount of leakage to areas beyond the Niagara Frontier region, representing the value of goods and services not available locally. As the table indicates, the total direct impact of the project varies from about \$110 million as a minimum projection to roughly \$120 million on the upside. These figures represent the sum of estimated

construction costs, annual operating expenses, and potential new tourist spending in the region induced by development of the complex.

When any new facility is developed in an area, the effect spreads well beyond the direct impact generated. Employees at the site, for example, spend their wages on a variety of goods and services offered by businesses in the region, which in turn are paid out by these businesses to their own employees and to their suppliers, and so on in a continuous cycle. This repeated turnover, referred to as the multiplier effect, generates secondary benefits, which studies in the field suggest may range from 1.6 to 2.5 times the direct impact. An average multiplier of 2.0 has been used in this analysis, yielding a combined direct and indirect project impact of between \$221 million and \$241 million. The total economic value of the project, accordingly, is nearly three times the estimated \$75 million to \$85 million cost of development.

#### **B. Specific Components of Impact**

Employment and payroll generation, expenditures on materials and supplies, induced visitor spending, and incremental tax revenues attributable to the project constitute the most prominent and readily measurable forms of impact. The paragraphs to follow describe each of these major benefits.

**Employment and Payroll Generation.** Table 11 presents an estimate of the number of new jobs and payroll created by the Buffalo Harbor Center attraction during both construction and ongoing operational periods. As indicated, direct employment generated during construction is estimated at 1,213 to 1,375 jobs, representing \$41.2 million to \$46.8 million in total payroll. When multiplier effects are taken into consideration, the employment impact doubles to between

Table 10

**SUMMARY OF THE ECONOMIC IMPACT OF  
BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<u>Range</u>	
	<u>Low</u>	<u>High</u>
Construction Expenditures (one-time impact; in thousands)	\$75,000	\$85,000
Operating Expenditures (annual impact; in thousands) 1/	<----- 10,358 ----->	
Off-Site Induced Tourist Expenditures (annual impact; in thousands) 2/	<----- 24,960 ----->	
Total Direct Impact	\$110,318	\$120,318
Regional Multiplier	<----- 2.0 ----->	
Total Output of Goods and Services Generated by Project (thousands) 1/	\$220,636	\$240,636

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1/ From Table 8.

2/ From Table 13.

Source: Harrison Price Company.

Table 11

**EMPLOYMENT IMPACT OF BUFFALO HARBOR CENTER**  
(Constant 1994 Dollars)

	Range	
	<u>Low</u>	<u>High</u>
<b>Construction Period (One-Time Impact)</b>		
Estimated Capital Cost (thousands)	\$75,000	\$85,000
Direct Payroll Generated (at 55 percent; in thousands)	\$41,250	\$46,750
Direct Employment Generated (at \$34,000 per FTE job) 1/	1,213	1,375
Regional Multiplier	<----- 2.0 ----->	
Total Direct and Indirect Payroll Generated (thousands)	\$82,500	\$93,500
Total Direct and Indirect FTE Employment Generated	2,426	2,750
<b>Operating Period (Annual Impact)</b>		
Direct Payroll Generated (thousands) 2/	<----- \$5,284 ----->	
Direct Employment Generated (at \$24,000 per FTE job) 3/	<----- 220 ----->	
Regional Multiplier	<----- 2.0 ----->	
Total Direct and Indirect Payroll Generated (thousands)	<----- \$10,568 ----->	
Total Direct and Indirect FTE Employment Generated	<----- 440 ----->	

FTE means full-time equivalent.

1/ Average annual wages or salary, including benefits, based on data from the U.S. Bureau of Economic Analysis.

2/ From Table 8; includes operating labor and benefits plus 85 percent of general and administrative costs.

3/ Average annual wages or salary, including benefits, based on comparable aquarium/museum experience.

Source: Harrison Price Company.

2,426 and 2,750 jobs and \$82.5 million to \$93.5 million in payroll. During the operating period, aggregate payroll will amount to some \$5.3 million per year (comprised of operating labor and 85 percent of general and administrative costs as previously shown in Table 8). This translates into full-time equivalent employment of 220 jobs. After applying the gross multiplier, total direct and indirect impact is estimated at 440 jobs and \$10.6 million in payroll each year.

**Purchases of Materials and Supplies.** Another area in which Buffalo Harbor Center will have an appreciable impact is the purchase of various materials and supplies consumed in construction and operation. As indicated in Table 12, a projected 75 percent of the development budget, or \$23.5 million to \$28.7 million, will probably represent materials purchases, an estimated 70 percent of which would be bought from local or regional suppliers. The resulting direct impact is some \$17.7 million to \$20.1 million, which increases to between \$35.4 million and \$40.2 million after allowing for indirect impact. The ongoing operating budget for the attraction was established earlier in this report at \$8.5 million per year exclusive of labor, of which some 60 percent, or \$5.1 million, is estimated to represent outlays on maintenance, supplies including animal feed, and similar expenses. On the assumption that 75 percent of these expenditures are made locally, direct impact amounts to about \$3.8 million annually. Combined direct and indirect impact is estimated at approximately \$7.6 million per year, as shown.

**New Visitor Spending Generated.** There will be two major categories of visitor spending induced by the project. First, new on-site expenditures on admission tickets, food and beverages, merchandise, and special event rentals will be generated by the project. Secondly, tourists attending the

attraction will generate spillover benefits to merchants and service businesses in the region--such as gasoline stations, hotels or motels, restaurants, and retail stores--as an adjunct of their visit to the subject complex itself. Projected total on-site visitor spending, highlighted in Table 13, is roughly \$17.0 million, a sum which represents new money introduced into the economy that would not occur without development of the subject attraction. A multiplier has not been applied to this figure since the secondary benefits of on-site visitor spending have already been accounted for in payroll and materials purchases impact as described earlier.

With respect to off-site visitor spending, HPC has assumed that Buffalo Harbor Center will induce, on average, a gain of one-half day in tourist length of stay in the region. Based on spending rates discussed in the earlier September 1992 report (refer to Table 15 in that document), this increase in stay time translates into an induced per capita outlay of roughly \$32 which, when multiplied by the expected number of tourists attending the attraction, yields total induced off-site spending of approximately \$25 million. After allowing for the regional multiplier, new off-site spending to be realized grows to \$49.9 million. Aggregate on- and off-site visitor spending generated by Buffalo Harbor Center, including multiplier effects, thus comes to a total of \$66.9 million.

**Incremental Tax Revenues Generated.** The final impact category to be addressed in this analysis is incremental retail sales and transient occupancy (hotel/motel) tax revenues generated by the project. Table 14 presents an estimate of total visitor spending subject to the retail sales tax, which includes all on-site spending except admissions (it has been assumed that as a nonprofit enterprise, admission tickets to Buffalo Harbor Center would be tax-exempt) and

Table 12

**EXPENDITURES ON MATERIALS AND SUPPLIES  
GENERATED BY BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<u>Range</u>	
	<u>Low</u>	<u>High</u>
<b>Construction Period (One-Time Impact)</b>		
Total Nonlabor Construction Cost (thousands)	\$33,750	\$38,250
Estimated Purchases of Materials and Supplies (at 75 percent; in thousands)	\$25,313	\$28,688
Estimated Proportion Purchased in Buffalo Region	<----- 70% ----->	
Total Direct Impact (thousands)	\$17,719	\$20,081
Regional Multiplier	<----- 2.0 ----->	
Total Direct and Indirect Impact (thousands)	\$35,438	\$40,163
<b>Operating Period (Annual Impact)</b>		
Total Nonlabor Operating Costs (thousands) 1/	<----- \$8,465 ----->	
Estimated Purchases of Materials and Supplies (at 60 percent; in thousands)	<----- \$5,079 ----->	
Estimated Proportion Purchased in Buffalo Region	<----- 75% ----->	
Total Direct Impact (thousands)	<----- \$3,809 ----->	
Regional Multiplier	<----- 2.0 ----->	
Total Direct and Indirect Impact (thousands)	<----- \$7,619 ----->	

1/ From Tables 5 and 8; includes all nonlabor operating costs plus cost of goods sold.

Source: Harrison Price Company.

Table 13

**NEW VISITOR SPENDING INDUCED BY  
BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<b><u>Number or Amount</u></b>
<b>On-Site Visitor Expenditures (thousands) 1/</b>	
Admissions	\$9,324
Food and Beverage	2,400
Merchandise	4,800
Special Events	<u>504</u>
Total Direct Impact	\$17,028
<b>Off-Site Visitor Expenditures 2/</b>	
Estimated Annual Attendance Derived from Tourist Market (thousands) 3/	780
Estimated Additional Per Capita Expenditure in Buffalo Region 4/	\$32.00
Total Direct Impact (thousands)	\$24,960
Regional Multiplier	2.0
Total Direct and Indirect Impact (thousands)	\$49,920
<b>Combined On- and Off-Site Expenditures (thousands)</b>	<b>\$66,948</b>

1/ From Table 5; includes spending by both residents and tourists.

2/ Assumes that 65 percent of total attendance will be derived from the tourist market (refer to September 1992 report).

3/ Assumes an incremental gain in average tourist length of stay in the region of 1/2 day multiplied by an average daily per capita expenditure of \$64 (0.50 days x \$64 = \$32).

Source: Harrison Price Company.

Table 14

**TAXABLE VISITOR EXPENDITURES GENERATED BY  
BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<u>Amount or Factor</u>
<b>On-Site Visitor Expenditures Subject to Tax (thousands) 1/</b>	
Food and Beverages	\$2,400
Merchandise	4,800
Special Events	<u>504</u>
Total	\$7,704
<b>Off-Site Visitor Expenditures 2/</b>	
Public Transportation (at 11 percent)	\$2,746
Gasoline and Automotive Services (at 16 percent)	3,994
Lodging (at 24 percent)	5,990
Food and Beverages (at 33 percent)	8,237
Entertainment and Recreation (at 8 percent)	1,997
Retail Purchases (at 8 percent)	<u>1,997</u>
Total	\$24,960
Estimated Proportion Subject to Tax	65%
<b>Off-Site Expenditures Subject to Tax (thousands)</b>	\$16,224
<b>Combined On- and Off-Site Expenditures Subject to Tax (thousands)</b>	\$23,928

1/ From Table 5; includes spending by both residents and tourists.

2/ Estimated distribution of the \$32 incremental off-site average tourist expenditure, based on data contained in the September 1992 report.

Source: Harrison Price Company.

approximately two-thirds of all off-site spending (a portion of these expenditures going to nontaxable goods and services). In the aggregate, on- and off-site visitor spending on the order of \$23.9 million would be subject to the retail sales tax.

A total retail sales tax rate of 8 percent currently prevails in Buffalo, 4 percent of which goes to the State of New York, 3 percent to localities and school districts, and 1 percent to Erie County. As Table 15 indicates, these three entities will share some \$1.9 million annually in direct new retail sales tax revenue. In addition, Erie County will realize another \$779,000 per year in direct transient occupancy tax revenue given the projected increase in average tourist length of stay, the proportion of incremental spending associated with lodging, and the present 13 percent tax rate. After allowing for the regional multiplier, a total direct and indirect tax increment (retail sales plus transient occupancy) of roughly \$5.4 million per year results.

#### **Economic Impact Summary.**

The preceding analysis reveals that the Buffalo Harbor Center project will generate substantial economic benefits. As the attraction is expanded over time, these benefits will also grow. Equally significant, though not quantifiable, are the social benefits to be derived, including heightened community prestige resulting from the development of a high-quality destination attraction, augmentation of the local inventory of educational resources, provision of a means for increasing the appeal of downtown Buffalo to tourists and, most importantly, creation of a catalyst for the renaissance of a long-neglected and immensely valuable downtown waterfront.



Table 15

**INCREMENTAL TAX REVENUES GENERATED BY  
BUFFALO HARBOR CENTER  
(Constant 1994 Dollars)**

	<b>Amount or <u>Factor</u></b>
Visitor Expenditures Subject to Tax 1/ (thousands)	
On-Site Visitor Expenditures 2/	\$7,704
Off-Site Tourist Expenditures	<u>16,224</u>
Total	\$23,928
Direct Retail Sales Tax Revenue Generated (thousands)	
State of New York (at 4 percent)	\$957
Localities and School Districts (at 3 percent)	718
Erie County (at 1 percent)	<u>239</u>
Total	\$1,914
Direct Hotel/Motel Tax Revenue Generated (at 13 percent; in thousands) 3/	\$779
Total Direct Tax Impact (thousands)	\$2,693
Regional Multiplier	2. 0
Total Direct and Indirect Tax Impact (thousands)	\$5,386

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1/ From Table 14.

2/ Includes spending by both residents and tourists.

3/ Based on estimated incremental lodging expenditures as shown  
in Table 14.

Source: Harrison Price Company.

